PRE-STOCKING MANAGEMENT

PART-I

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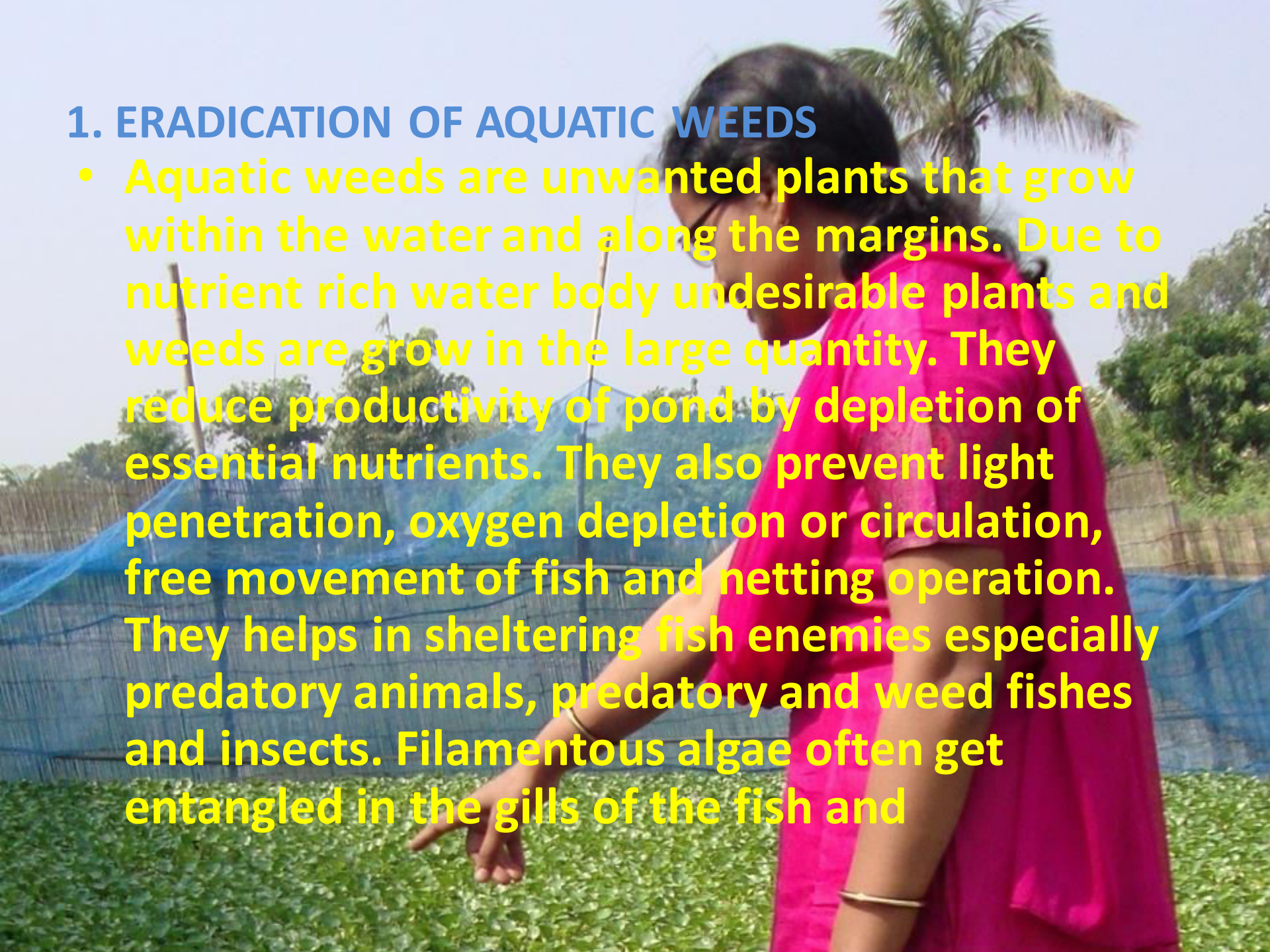
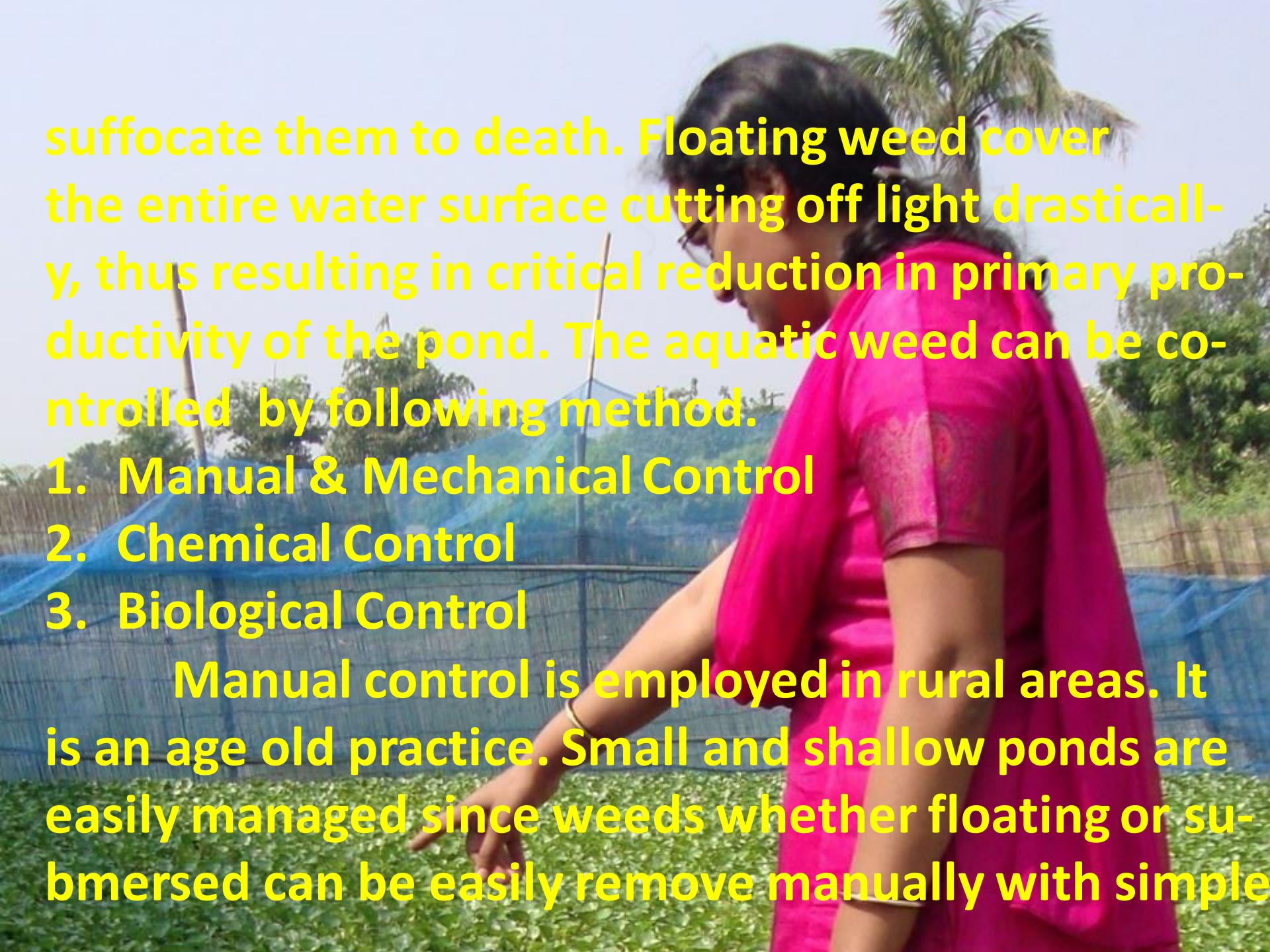
INTRODUCTION

- Pre- stocking management means proper preparation of ponds to remove the cause of poor survival, unsatisfactory growth etc. and also to ensure ready availability of natural food in sufficient quantity and quality for the spawn /fry/fingerling to be stocked.
- Pre-stocking management involves the following steps :-



1. ERADICATION OF AQUATIC WEEDS

- Aquatic weeds are unwanted plants that grow within the water and along the margins. Due to nutrient rich water body undesirable plants and weeds are grow in the large quantity. They reduce productivity of pond by depletion of essential nutrients. They also prevent light penetration, oxygen depletion or circulation, free movement of fish and netting operation. They helps in sheltering fish enemies especially predatory animals, predatory and weed fishes and insects. Filamentous algae often get entangled in the gills of the fish and



suffocate them to death. Floating weed cover the entire water surface cutting off light drastically, thus resulting in critical reduction in primary productivity of the pond. The aquatic weed can be controlled by following method.

1. Manual & Mechanical Control
2. Chemical Control
3. Biological Control

Manual control is employed in rural areas. It is an age old practice. Small and shallow ponds are easily managed since weeds whether floating or submersed can be easily remove manually with simple

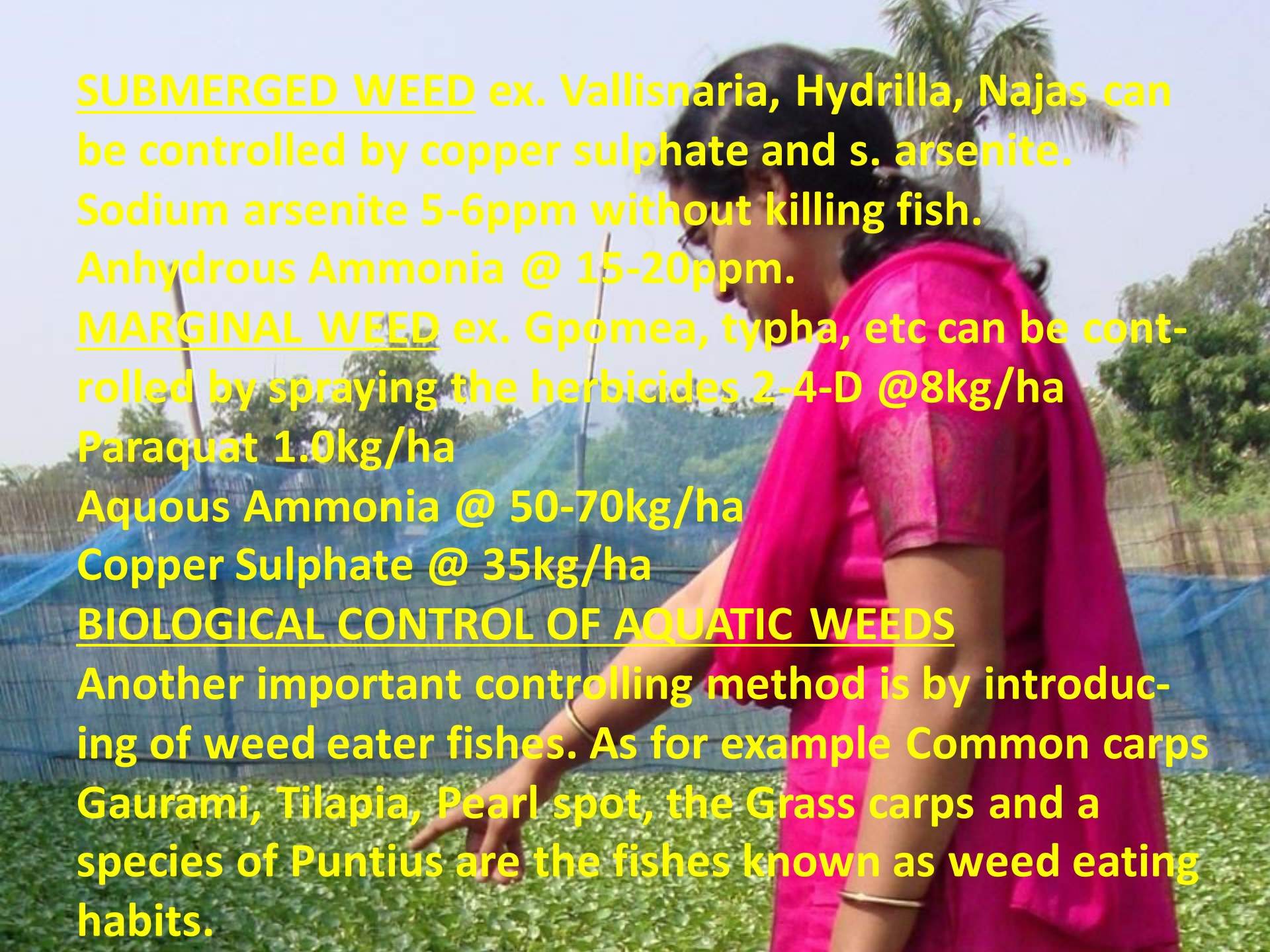
implements like Sickles, Rakes, Hooks, Nets and r-opes.

Mechanical devices used for clearance of ro-oted submerged weeds are steel cables culting ch-ains and diesel operated winches.

CHEMICAL CONTROL -Large pond body can not be managed by manual and mechanical method. Therefore certain commercially available means of eradication of undesirable aquatic plants.

Floating weeds ex. Water Hycinth -2.4-Dichlorophe-novy acitic acid.

Emergent weeds ex. Water lily, lotus are erodicated by spraying theherbicide 2-4-D @8-10kg/ha.

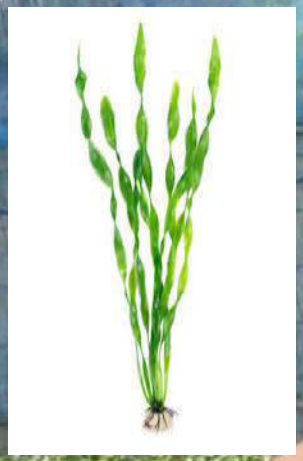


SUBMERGED WEED ex. Vallisnaria, Hydrilla, Najas can be controlled by copper sulphate and s. arsenite.
Sodium arsenite 5-6ppm without killing fish.
Anhydrous Ammonia @ 15-20ppm.
MARGINAL WEED ex. Gpomea, typha, etc can be controlled by spraying the herbicides 2-4-D @8kg/ha
Paraquat 1.0kg/ha
Aquous Ammonia @ 50-70kg/ha
Copper Sulphate @ 35kg/ha

BIOLOGICAL CONTROL OF AQUATIC WEEDS

Another important controlling method is by introducing of weed eater fishes. As for example Common carps Gaurami, Tilapia, Pearl spot, the Grass carps and a species of Puntius are the fishes known as weed eating habits.

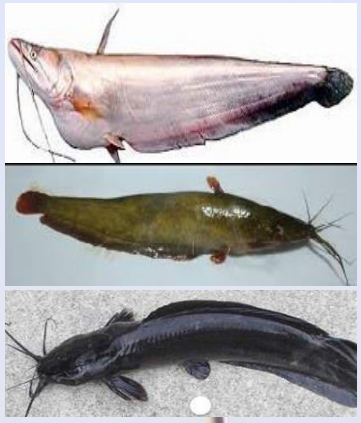
Grass carps is the most effective biological control agent against most of the submersed and floating weeds except the water ferns. Grass carps consume weeds at least 50% of their body weight in a day. About 300-400 fish, each of about 0.5kg weight are enough to clear 1ha of Hydrilla infested water body in about a month.



ERADICATION OF PREDATORY FISHES & WEED FISHES

Large number of predatory fishes are found in the pond which prey upon the spawn, fry and fingerlings of carps. Weed fishes complete with carp for food, space and oxygen. So predatory and weed fish should be complete eradicated from Nursery , rearing and stocking pond before these ponds are stocked .

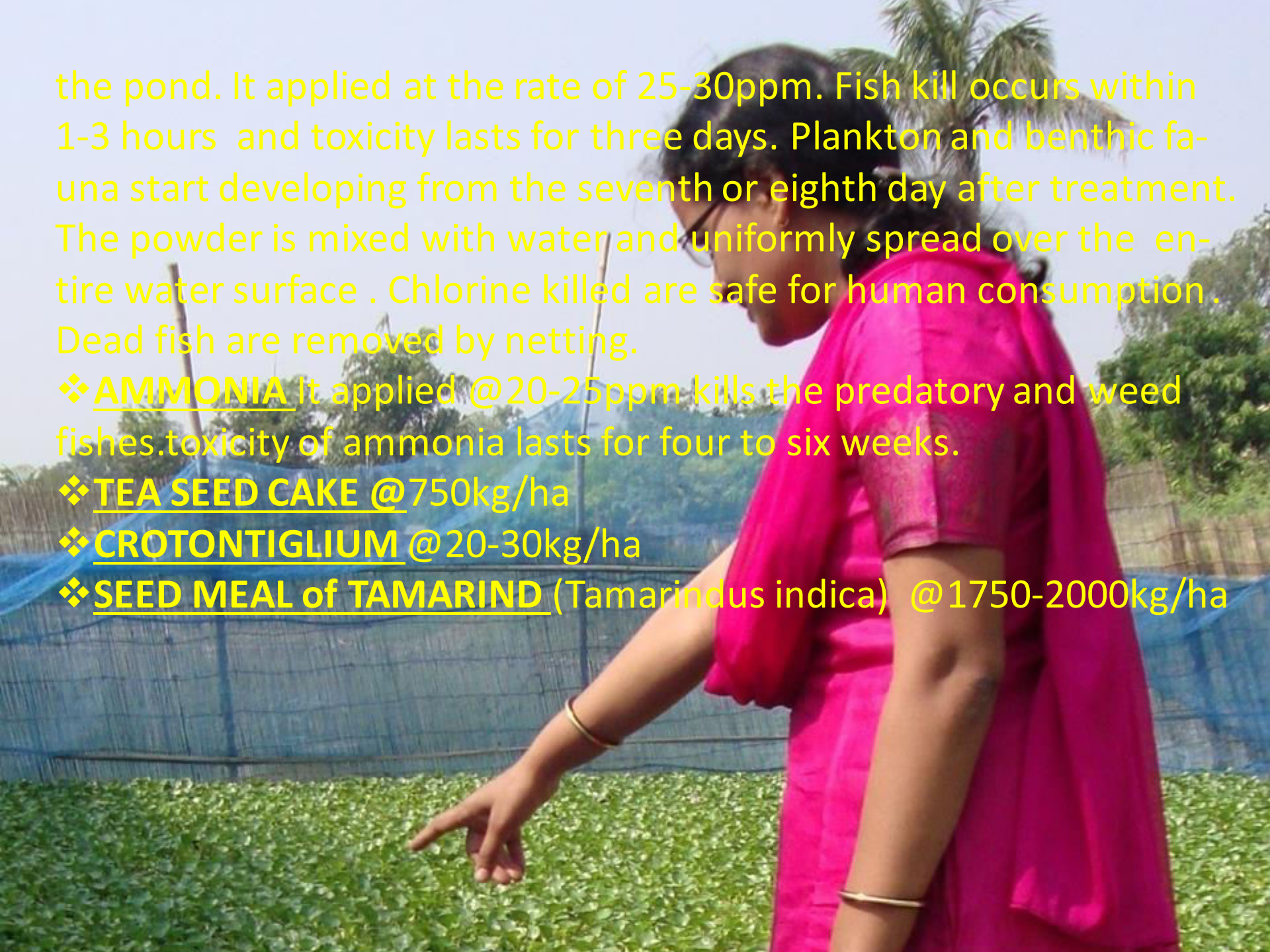
The most common predatory fishes are ***Channa spp., Clarias batrachus, H.fossilis, Pangasius, Mystus spp, Ompok spp, Wallago attu , Glassogobius giuris, Mastacembelus spp, & Amphipnous cuchia etc.***



Various methods are adopted for their eradication during pond prep-ration or pre-stocking of spawn, fry & fingerlings. Since drainage of pond is not always possible and repeated netting don't assure total removal of undesirable biota particularly trash and predatory fish. Some toxicant are used for eradication of predatory and weed fishes.

❖ **MAHUA OIL** (Basia Latifolia) It kills all the fish species within a few hours when applied at the rate of 250ppm. It contains about 4.6% of active ingredient , the saponia. It should be applied at least two weeks before stocking the ponds.

❖ **BLEACHING POWDER** ($caocl_2$ calcium hypochlorite) It is another practical & safe fish toxicant. It kill all the predatory and weed fish of



the pond. It applied at the rate of 25-30ppm. Fish kill occurs within 1-3 hours and toxicity lasts for three days. Plankton and benthic fauna start developing from the seventh or eighth day after treatment. The powder is mixed with water and uniformly spread over the entire water surface . Chlorine killed are safe for human consumption . Dead fish are removed by netting.

- **AMMONIA** It applied @20-25ppm kills the predatory and weed fishes.toxicity of ammonia lasts for four to six weeks.
- **TEA SEED CAKE @**750kg/ha
- **CROTONTIGLIUM** @20-30kg/ha
- **SEED MEAL of TAMARIND** (Tamarindus indica) @1750-2000kg/ha